THE GENESEE FARMER.

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GENESEE FARMER.

SATURDAY, JULY 8, 1837.

MATTERS IN GENERAL.

Making Butter.

Every farmer who makes his own butter, will be glad to learn how to make the most from his milk, and at the same time produce an article of good quality. Putting a pint of cold water during the summer months into each pan of milk when strained from the cow will materially aid these desirable objects. The milk will not sour as quick, and the cream will rise more perfectly. The reason why butter made in the summer becomes rancid so soon, is owing to the imperfect manner in which the milk, frequently soured before churning, is separated from the butter. Retarding the souring of the milk by the application of cold water, obviates this difficulty.

Budding or Inoculation.

The season is near when this operation may be performed to advantage, and where an orchard or nursery is young, this method of propagating choice fruits is preferable to grafting. Pears, apples, plums, cherries, peaches and quinces, can be inoculated with success; indeed the process is applicable to most trees whether of fruit or forest. Where pears are grafted or inoculated into apple, quince or thorn trees, the insertion should be made as near the root at possible, so that when earth is heaped around the stock, roots may spring out and ensure the growth of the shoot. Inoculated into the tops of apple trees, pears grow rapidly, and produce fruit early; but they are short lived, and require a succession of grafts or inoculations to ensure a supply of fruit, for a term of years. It is well known that the seeds of apples, peaches, &c. rarely produce fruit resembling the parent, hence in nurseries or orchards, budding or grafting is the only method of securing trees or fruit of a certain kind, and this operation will not be neglected by the lover of good fruit.

Marl.

The Geological investigation and survey of the state which is now going on, will give owners of the soil an opportunity of having its constiutent parts tested; and as marl is one of the most valuable deposits to be expected in the country, we hope those who have beds resembling this material, will not lose the opportunity offered of submitting specimens for examination. The time will come when our lime and marl will be considered worth more to the country than the gold mines of the south, and more surely productive of wealth, to the owner. The sand plains of New Jersey have been brought to an unparalleled degree of productiveness by the use of this article, and where soils are exhausted of lime, and are not at the same time too much inclining to clay, marl will be found the grand restorative of fertility.

Black Fly.

This insect frequently produces great damage by devouring turneps and similar plants. Some have recommended sowing ashes over the field, but we have never found any thing so effectual as fine soot sprinkled on the plants when covered with dew. Rows of ruta baga are readily dusted with it; and experience has shown that as a top dressing for plants, soot has few equals. The salt contained in this substance acts as a powerful stimulus to most plants; and the intensely bitter taste left on the leaves, repels every insect intruder. We applied it to half an acre of ruta baga last year, and scarcely lost a plant by the fly.

The Slug.

This disagreeable snail-like animal, is uncommonly plenty this year, and will be found by the gardener or fruit-grower preying on tender plants, strawberries, &c., and drawing its slimy length over the leaves of the young fruit tree. Lime, newly slaked, is fatal to them. and this substance, or ashes, strewn over them when on the ground, or thrown upon when on trees, will make a speedy riddance of the pest.

Packing Butter.

During the summer months butter is usually lower in price than at other seasons of the year, and hence its preservation sweet and good when packed, may be an object in an economical point of view, at this pinching time for cash. Take a stone pot or jar that will hold thirty or forty pounds, clean it thoroughly, and wash it in strong cold brine. Take of new sweet butter, well made, and free from butter milk, (if enough to fill the pot at once so much the better) work it well and put a layer of it a few inches in thickness in the jar, beat it down solid with a wooden beater, turning off the milk that will escape occasionally, then repeat the process until the pot is filled within an inch and a half of the top, with butter thoroughly pounded down. On the top of this mass pour one inch of clear pure brine, made by dissolving salt in warm water until saturated, and then cooled. Over this lay a clean cloth, and if this is secured by a smooth stone, it will be better than a board. Keep the jar at a low temperature, and the butter will keep good for an indefinite length of time, only examining it occasionally to see that it is covered with the brine and renewing it if necessary. Last summer we put down some jars in this way, and they kept perfectly fine for winter's use; and Judge Buel has preserved butter in this way for twenty months in good condition. The only requisites appear to be pure sweet butter to pack, solidity in the mass by beating, total exclusion of the air by brine, and the lowest temperature possible.

Marking Sheep.

In some excursions about the country, we perceive that the roads are full of sheep, and that our farming friends have adopted various methods of marking them so as to readily reclaim their own. In ordinary cases, and when sheep are kept in pastures the ear mark is generally deemed sufficient, but when they are allowed to run at large—a very poor practice by the by—some more easily distinguished mark is desirable. One of the most common is the initials of the owner, on the side of the animal, put on with either red chalk, red or black paint, or tar. The last must be the most objectionable of all, as the red chalk does not injure the wool in the least, the paint but little, while the tar forms a pitch-like mass on the extremities of the wool, which must be cut off previous to manufacture, or serious injury to the cloth will be sustained. It is evident, since the tar is applied immediately after shearing, that the quantity of wool injured must depend in a great degree on the closeness or workmanlike manner in which the shearing is performed. If close, the damage is trifling; but if, as is frequently the case, the wool is left on to the length of half an inch, and the tar is applied in the usual liberal manner, rubbed in with a stick, the damage to the user of the wool for the ensuing year is serious. If sheep must be turned out, perhaps the best preparation to mark them would be some black paint made of drying linseed oil, and lampblack, put on in letters cut in pasteboard or sheet lead, and as small as will be distinctly legible, with a small painter's brush.

Useful if True.

"We every day hear complaints about watery potatoes. Put into the pot a piece of lime as large as a hen's egg; and how watery soever the potatoes may have been, when the water is poured off, the potatoes will be perfectly dry and mealy. Some persons use salt, which only hardens potatoes." So says one of the foreign journals, and we advise those who are compelled to use watery potatoes to try the lime. There is we think some philosophy in the recommendation, as the alkali of the lime may correct the tendency to acidity always manifest in poor potatoes. By the way, experience teaches us that good ripe *pinkeyes*, well secured in the ground thro' the winter, and kept dry till wanted, will keep till July or August, without becoming watery.

A Nation's Bread.

We hear much said in the papers of the immense quantity of breadstuffs imported from abroad, and the opinion seems to be general that such importation must have a decided effect on the wheat market of this country. The fallacy of such an opinion can we think be made easily apparent, and the fact shown that all the grain that has been or will be imported, has but little more influence on a supply of bread for the nation, than a bucket of water would in filling the ocean. To furnish the population of the United States with bread, 100 millions of bushels will be required; estimating the number at 14 millions, and allowing seven bushels of grain per head, which, making allowance for the coarse grains and corn usod for food, will not be considered too liberal an estimate.

The quantity of wheat imported into the United States since last harvest is estimated not to exceed one million of bushels; and the importation, it is evident has nearly ceased. If 100 millions are required by the nation, then not far from 300,000 bushels a day will be consumed; consequently the amount imported would furnish the country with bread about three days and a half. But it must be remembered that we have sent abroad much more than we have received; that from our last year's crop, scanty as it was deemed, quantities have been sent to the West Indies, South America, and Texas, and at the present moment the supply in the country is ample. If, as present appearances indicate, the coming harvest should be favorable, not only will the country be filled with abundance, but the pretext of apprehended scarcity will no longer serve the purpose of exacting exorbitant prices, or withholding necessary supplies from the poor.

But though there is thus a great probability that a want of bread will not at present be felt in this country; such an event, with the blessing of heaven, should be placed beyond a possibility. It is clear we must pay more attention to agriculture. We have lawyers, and doctors, and merchants, and professional men in general, more than enough to supply the demand; we must have more farmers; and these must be better informed, and theoretically as well as practically acquainted with their business. We must have agricultural societies, and agricultural schools; and no man should be deemed qualified to teach even a common school, who is unacquainted with the great principles that should govern the labors of the farmer, and is unable to teach the analysis of soils; and the physiology of vegetation, to the farmer's sons around him. Books may be prepared, which shall give the necessary information on topics connected with agriculture, and adapted to schools, we know of few places where classes of boys might not be found, where their study and use might not be decidedly beneficial. We hope the labors of the American Society for promting Usefnl Knowledge, will be early directed to this subject; as there are few classes of publications contemplated by that society, which will be so extensively and permanently useful. A decrease in the products of the earth is always ominous. The history of the world shows, that the solid additions to the capital, and the consequent prosperity of any country mainly depends on the productions of the soil, and that the best patriot, as well as political economist, is he who most speeds the plough.

Wheat Worm.

The parent fly, or what our observations last year induced us to consider as such, of this formidable enemy of the farmer, has made its appearance earlier in the season than formerly; and, as was to be expected from its rate of pregress wastward from the valley of the Hudson, in increased numbers. The fly which we found last year very active on ears of wheat, and on the kernels of which we found numbers of the eggs and worms, scarcelyvisible to the naked eye, is a slender bodied one, legs longer than the common house fly and standing higher, the body changeable purple and green, and the head invariably of the most brilliant green. The colors when seen through a microscope are splendid. The female is armed with an ovipositor like the bot fly of horses, and which folds under her abdomen in a similar way. This stinging apparatus can be seen by the naked eye, but much more distinctly by the aid of the glass; and we once saw this insect depositing eggs on a blackberry, where they speedily became vivified. Of the scientific name and propeclassification of this fly we are ignorant; and it is very possible that more than one variety of the same species may be found among the enemies of wheat.

We hope that the attention of farmers will this year be directed particularly to this insect, or others which may prey on wheat in the field, distinguish their kinds and habits as far as practicable, and report their results.—Where the full grown worms can be found in the kernel, as is sometimes the case, by preserving them in earth in close vessels the progeny may be ascertained beyond a doubt, and this mode of determining their characters should be adopted. The growing of wheat has become nearly impossible in the eastern counties of this state, from this single cause; and should such a result ensue in the Genesee country the consequences would be deplorable; it would be like the destruction at a blow of a nation's granary. Men of science as well as the practical farmer should here be on the alert; the occasion demands, and will reward unceasing vigilance.

Notices.

The New-York Farmer, now in its tenth volume, will hereafter be published semi-monthly instead of monthly as heretofore. (See advertisement.)

The publication of the *Ohio Farmer*, at Columbus, has been resumed. Semi-monthly at $1 a year—S. Medary, publisher.

A new semi-monthly, called the *Western Agriculturist*, at $1 per annum, has been commenced at Ravenna, Portage county, Ohio—E. R. Selby, publisher.

The Farmer and Gardener, (the successor of the American Farmer at Baltimore) heretofore published at $5 per annum, has been reduced to $2,50, if paid within one month from the time of subscribing, or $3 if paid after that time. Notwithstanding this reduction in price there has been no reduction in the amount of matter given, or in the spirit and energy of its editor, E. P. Roberts—published weekly.

The price of the *Silk Culturist*, at Hartford, Conn., has been raised from 50 cents to $1, per year—it is cheap at the latter price. F. G. Comstock, publisher.

The *Northampton Farmer* and *Sugar Beet Culturist*—a monthly at 50 cents a year—has recently been commenced at Northampton, Mass.—L. Ferry, publisher.

The Farmer.—We have received the first number of a monthly work with this title from Shelbyville, Tenn.—$1 per annum—G. Cook, publisher.

We have also received from Lansingburgh, our friend *Walsh's Mercantile Advertiser*, from which we perceive that he is as persevering in his efforts to furnish his friends with every article necessary for the house, the person, or the farm, as he is to induce them to partake of the benefits to be derived from a subscription to the agricultural publications of the day. He announces with no little *gusto*, and we participate with him in the pleasure, that "*Walsh's General Store stands on a solid foundation.*" The reason for this is, that he *buys* for *cash* and *sells* for *cash*,—buys *cheap* and sells *cheap*, "preferring a nimble sixpence to a slow shilling." He says—'I trade on my own means. I have never given a note but once in my life, and that was for a small balance in purchasing an estate, and was redeemed before it came to maturity." "Cash payments," says our good friend, and truly too, "promote frugality. People with money in hand, are generally careful in their purchases, and scrupulous to get their money's worth; while those who can be accommodated with a distant pay day are apt to increase their responsibilities unnecessarily. The credit customer is not over particular in the consideration of those points which belong to a good bargain; he neither searches the market, nor examines closely the quality and price with that prudent discretion which commonly marks the dealings of one with cash in hand."

From the Complete Practical Farmer.

Mowing.

They who have not been in their youth accustomed to do this work, are seldom found to be able to do it with ease or expedition. But when the art is once learnt, it will not be lost.

As this is one of the most laborious parts of the husbandman's calling, and the more fatiguing as it must be performed in the hottest season of th year, every precaution ought to be used which tends to lighten the labor. To this it will conduce not a little, for the mower to rise very early, and be at his work before the rising of the sun. He may easily perform half the usual day's work before nine in the morning. His work will not only be made easier by the coolness of the morning air, but also by the dew on the grass, which is cut the more easily for being wet. By this means he may lie still and rest himself during all the hottest of the day, while others who begun late are sweating themselves excessively; and hurting their health, probably by taking down large draughts of cold drink to slake their raging thirst. The other half of his work may be performed after three or four o'clock, and at night he will find himself free from fatigue.

If the mower would husband his strength to advantage, he should take care to have his scythe, and all the apparatus for mowing, in the best order. His scythe ought to be adapted to the surface on which he mows. If the surface be level and free from obstacles, the scythe may be long and almost straight and he will perform his work with less labor, and greater expedition. But if the surface be uneven, cradley, or chequered with stones, or stumps of trees, his scythe must be short and crooked. Otherwise he will be obliged to leave much of the grass uncut, or use more labor in cutting it. A long and straight scythe will only cut off the tops of the grass in hollows.

A mower should not have a snead that is too slender; for this will keep the scythe in a continual tremor, and do much to hinder its cutting. He must see that it keeps perfectly fast on the snead; for the least degree of looseness will oblige him to use the more violence at every stroke. Many worry themselves needlessly by not attending to this circumstance.

Mowing with a company ought to be avoided by those who are not very strong, or who are little used to the business, or who have not their tools in the best order. Young lads, who are ambitious to be thought good mowers, often find themselves much hurt by mowing in company.

Mowers should not follow too closely after each other, for this has been the occasion of fatal wounds. And when the dangerous tool is carried from place to place, it should be bound up with a rope of grass, or otherwise carefully secured.

Mr. de Lisle introduced in England, the mowing of wheat. The method is this: The scythe he uses is at least six inches shorter in the blade than the common scythe; and instead of a cradle, has two twigs of osier put semi-circularwise into holes made in the handle of the scythe, near the blade, in such a manner that one semi-circle intersects the other.

By this method of mowing wheat, the standing corn is always at the left hand. The mower mows it inward, bearing the corn he cuts on his scythe, till it comes to that which is standing, against which it gently leans. After every mower, follows a gatherer, who being provided with a hook or stick about two feet long, gathers up the corn, makes it into a gavel, and lays it gently on the ground.—This must be done with spirit, as another mower immediately follows.

As reaping is slow and laborious work, it would be right for our countrymen to learn this method of mowing their wheat; which will undoubtedly answer also for other sorts of grain.

Hay-Making.

The first thing to be considered about hay-making is the time of cutting the grass. It should not be cut too early, or before it has got its growth, for this will cause it to shrink too much in drying. On the contrary, it should not stand too late, or till the seed be quite ripe. It is not only harder to cut, but the ripeness of the seed will cause it to shatter out while drying, which will be a considerable loss, as the seed is the most rich and nourishing part; and the soil will be the more exhausted by nourishing the seed till it comes to maturity, and the next succeeding crop will be the poorer. There never can be any advantage in mowing late unless it be thickening the grass roots by scattering some of the seed where they were before too thin.

He that mows early has the advantage of longer days for drying his hay; and of shorter nights, when the dews are less detrimental to hay-making.

But the farmer who has many acres of the same kind of grass, cannot always expect to cut the whole of it in exactly the right season. That he may approach near to right as possible, he should cut the thickest grass first of all; especially if it be in danger of lodging, or so thick that the lowest leaves perish, or the bottoms of the stalks turn yellow.—The thinnest of his grass should be cut next, which is apt to be ripe soonest; and last of all, the middling sized grass, or that which is on a medium between thick and thin.

Where a second crop is expected the same year, thick grass should be cut a little earlier, that the roots may not be injured so much as to prevent their speedy recovery, by being closely covered too long by the first crop.

Some regard should be had to the weather, when the time of cutting is in contemplation. Those especially, should regard it, who are able to call in as much assistance as they please in hay-making.

Grass, which has not been washed by rain for several days, has a kind of gum on it, which is known by its adhering to the scythe. This gum is thought to be a benefit to the hay; and the farmers are fond of mowing their grass when this gum appears, rather than just after the grass has been washed by rain.

As to the drying of hay, or the manner of making it, I know there are a variety of opinions. The right way is to do it in such a manner that as much of the sap as possible may be retained, and in the best state that is possible. In this I should think all would agree. All persons will allow that too much drying is hurtful. It is certainly a loss to rake it, or stir it at all, when it is so dry that the leaves will crumble. And doubtless as much of the sap should be retained as is consistent with its being kept in good order for fodder, and for long keeping.

Some grasses will keep well with less drying than is needful for others. The Rhode-Island bent, as it is called, or red-top grass, will do with less drying than some other grasses. It has been much practiced to put up with so little drying that it heats in the mow to so great a degree, as to make it turn brown like tobacco; and it is known that cattle will eat it well, and thrive on it. But the mow will certainly send out part of the virtue of the hay in steams. I cannot but thing that all grasses should be so much dried, that the mows and stacks, though they have a degree of heat, should not emit any sensible steam; and I would not wish to have hay made brown by mow burning. It surely does not appear to so good advantage at market.

Were it not for the labor and cost, a good way of hay-making would be, for the hay-makers to follow at the heels of the mowers, at least as soon as the dew is off, and spread the swarths evenly; turn the grass about the middle of the same day, make it up into cocks before night; open the hay and turn it the next day; and so on till it be sufficiently dried, doubling the cocks if signs of rain appear. It will not commonly take more than two or three days to dry it unless it be very green, or uncommonly thick and rank. A person who has but little hay to make, need not be much blamed, if he do it in this way; especially if the weather do not appear to be settled.

The practice of the best English. Flemish, and

French farmers, is to expose the hay as little as pos-ible to the sun. It is carried in dry, but it preserves its green color; and you see hay two or three years old in their market, of so bright a green color, that we should scarcely conceive it to be cured,—yet they are in the practice of preserving it for years and value it more for its age. If such a course be best in climates so cool and cloudy, how much more important would it be under our scorching Summer suns.

But if the weather be unsettled, or if showers be frequent, it may be better to spread grass well, as soon as it is mowed, stir it often, cock it the same day it is mowed, open it in the next fair day when the dew is off, let it sweat a little in cock, and house it as soon as it is dry enough. It will bear to be laid greener on a scaffold, than in a ground mow; and in a narrow mow greener than in a broad one. And that which is at least of all made, should be put on a scaffold.—*Deane.*

"Having observed," says Hayward's Science of Agriculture, "that in a season when there was no rain whatever, and the hay had been made with rapidity, and carted within a short time after it had been cut that a greater quantity was destroyed and injured by being overheated and burnt, than in a catching irregular season; that when hay had not heated in the stack, it is frequently mouldy; that as hay lost its native green color, and approached a brown it lost its nutritive qualities; and that altogether the making of hay as usually conducted was a very precarious and teasing operation; I determined on trying to arrange a system on some more regular and certain principles, in which I succeeded; and by adopting a certain and regular course of operations, was enabled to make my hay of a uniform good quality; and, let the weather be as it might, at a regular expense of labor. And considering such a process not only of importance, as it insures a more perfect quality, but as it affords a more certain protection against the injuries usually consequent on the uncertainty of the weather, and overheating in the stack, and that it thus removes two great causes of anxiety, it may be well worth the public attention.

"In the first place, as to the state of the weather, it generally happens at this season of the year that there are three or four days dry; therefore on the beginning to cut the grass, as it is well known that during wet weather grass may be cut, and suffered to remain in the swarth for several days without injury; and it being desirable, where hands are plenty, to have a good quantity, or so much as will complete a stack in a day, in the same state of forwardness, I should prefer beginning to cut during the rainy weather; however, be this as it may, swarths should not be opened but on a certain fine day; and when this is done, the grass should be well shaken apart and equally spread over the ground. As soon as the upper surface is dry turn it well over; and in this operation great care should be taken to open and spread any cocks that may not have been divided in the first opening. This being done, commence raking into wind-rows, in time that the whole may be made into small cocks before night. *The second day these cocks must remain untouched, let the weather be wet or dry;* the third day if the weather be certain and fine, throw the cocks open: but if the weather be wet and threatening, they may remain another day, or until the weather is certain to be fine, for the day. The cocks should then be thrown according to the crop, into beds of two or three rows; and after three or four hours' exposure, turned over; and taking time to gather the whole into wind-rows and cocks before night; let this operation commence accordingly, *and none be left open;* the day after this, which in fine weather will be the fourth, *the cocks must again remain untouched, or not be opened, whether the weather be wet or dry.* On the fifth or next day, these cocks will only require to be opened for an hour or two, when they will be fit for the stack. The novelty of this mode consists only in suffering the hay to remain in the cock the second and third, or alternate days; and at first sight it may appear that so much time in fine weather must be lost, but this is not the case. Whilst the hay remains in cocks, a slight fermentation, or what is termed sweating, will take place, and in consequence, after it has been opened on the third and fifth days, it will prove to be just as forward as if it had been worked every day. And the advantages resulting from this, are, obviously, the following: by shortening the time of open exposure, the color of the hay is more perfectly preserved, and consequently the quality: and the fermentations or sweatings which take place in the cocks, proved so much to have diminished that principle, or inclination to prevent its heating injuriously in the stack; and the whole operation of making, whether it takes four days or eight, requires three days labor only; and the hay being left in that state every night, in which it is the least possibly exposed to the injuries of the weather, and in which it may remain for a day or two in uncertain weather without injurious exposure, much painful anxiety and useless attendance of laborers are obviated."—*Ib.*

Hovels for Sheep.

In my former communication, I stated that the severe winter of '35 and '36 caused a destruction of sheep in this quarter which was unprecedented,—that many with flocks similar in size to my own, lost hundreds upon hundreds, while my own loss, in consequence of being well provided with shelters, was only 38 out of 1500—that previous winters, and when my flocks were exposed, my loss varied from 50 to 150. As the foddering season is over, (truly a long one has it been,) and my sheep turned upon the fields, I will state the result of last winter's operations. Of lambs, having wintered nearly 500, I have not lost one. They were grained from the time they were put in winter quarters to the 15th ultimo; and here I with pride state the fact, that for the number, as regards uniformity of size, and good flesh, their equal will hardily be found in the State. Of grown sheep, out of 1300, 17 have died, six or eight of which was from old age. This, a thorough and critical wool-grower will not allow is good management, in permitting *old sheep* to die on my hands. I admit it; and my practice is, to select in the fall all inclining to old age and poverty, and put them by themselves, and in the spring or early in the summer, make sale of the flock with their lambs. The few of this description which died, were reserved last year on account of their fineness of fleece, and a wish to retain their lambs.

But, this inquiry will perhaps suggest itself to some sceptical reader of your Journal, whose self-sufficiency causes them to regard their own mode of management superior to every one else, and who perhaps think sheltering of sheep, among other things, mere *fudge*, viz: whether my sheep were not in better in flesh at the beginning of winter before the last, when so many of my neighbors lost their hundreds upon hundreds, while my own loss was less than forty? and further, were mine not naturally more hardy? I answer that I saw parts of several of the flocks mentioned, late in the fall, and then they were fully equal in flesh to my own; and also, that they are the same grade of sheep, and therefore no material difference of constitution. I call my own flock *Saxons;* but some of your readers, will better understand their grade, by naming the price I have obtained for their wool. It has been purchased in Boston for the Middlesex Company the last three years: the two last clips I received a little less than 76 cents per pound. So it must be the legitimate conclusion, drawn from all the facts I have stated above, and in my former communication, that in *saving of life*, my success is almost entirely to be ascribed to sheltering.

I will now briefly speak of another advantage or rather consequence, resulting from protection of sheep; viz: *the prevention of diseases.* I know it is difficult to get at facts to prove this; but your readers perhaps can gather the proofs of my position, as I have satisfactorily done, by reasoning from analogy,—from "man to brute." Will not exposure to the rude storms of winter and spring have a tendency to engender disease?—and if not active disease, will it not so affect the constitution that it is liable to curtail several years of their existence? Every candid and experienced wool-grower will answer in the affirmative. I leave, however, what is in some measure speculation, and turn to facts—for facts are truly stubborn, and I like them the better for it.

If there be any who doubt that sheltering of sheep will perfect and improve the quality, I will suggest a cheap method by which it can be thoroughly tested. Select in the fall two sheep of equal quality, as regards the wool; jacket one of them, as it is called, by covering the body of the animal with an oiled or painted canvass, in order that it be impervious to rain and let it be kept on, until shearing. Allow the other to go at large, without jacket or shelter, and the result, after comparing the two fleeces, will clearly establish the point in question. But the improvement of fleece is too important to be passed over lightly; I will, therefore, having my invoices at hand, give the result as stapled in the Middlesex Manufactory at Lowell, exhibiting the clips of '35 and '36. It will be remembered I stated, that the winter of '34 and '35 my sheep were not sheltered. I sheared about 200 more in '36 than in '35, and those I disposed of during the interim of the clips, consisted, mostly of sheep inclined to age and not altogether my coarsest.

Clip of 1835.			Clip of 1836.		
3 lbs.	Wool	extra.	12 lbs.	Extra.	
62½ "	"	prime	186 "	prime	
743 "	"	1st	1470 "	1st	
1092 "	"	2d	1169 "	2d	
1058 "	"	3d	869 "	3d	
260 "	"	4th	199 "	4th	
72 "	"	5th	37 "	5th	
12 "	"	6th	9 "	6th	

By a comparison of the above, it will be observed, that the stapling of the last clip shows a considerable increase of the higher qualities, and from what is above stated it is clearly proved that the difference is mainly to be ascribed to warm shelters.

Lansing, Tompkins Co., N. Y. M.
May 2d, 1837. *N. Y. Farmer.*

Late Crops.

Beans,—Will come to perfection if planted as late as the middle of July, if the season should be no more favorable than we usually have, if early kinds be planted, such as the Merimashee, Bremen, and Mountain Bush. When the earth has its summer's warmth, and is kept moist by rains, the growth of beans is astonishingly rapid and luxuriant.

Peas,—Flourish well sown late. And those who love them early and late, can only have them, (as well as beans) early and late, by using proper efforts.

Potatoes.—We would by no means omit mention of this all important vegetable. The earlier kinds may be planted to advantage through the month of June with, perhaps, a certainty of obtaining a good crop, if the season should be favorable. Indeed they may be planted for seed late in the month of July. Our experience has taught us that the latest planted are best for seed as they are more vigorous in growth than any others. We have frequently planted potatoes as late as the 4th of July and they yielded tolerably well. We once planted some on the 20th of July and they were excellent for seed, as they appeared to possess more life and vigor than those planted earlier.—*Yankee Farmer.*

Soiling Milch Cows.

The Zoarites, a religious sect of Germans, on the Muskingum river in Ohio, keep their milch cows constantly in the stall and feed them with the offal of the milk, hay, roots, &c.; and they are said to yield an extraordinary quantity of milk—some twenty quarts a day through the year. They also pay particular attention to their cleanliness. Their stalls are thoroughly washed daily, and the water used for this purpose, is carefully collected in reservoirs, and applied, in the form of liquid manure, to their hot houses and gardens.

In a late communication to the British Board of Agriculture it stated that 30 cows, 1 bull, 4 calves, ank 5 horses, were fed through the summer from 15 acres of clover, sown the preceding year. The labor of two men and two women was sufficient to tend them, and the nett produce of the season, in butter, from June to October, was £19 10s., nearly $90 from each cow.—*Silk Cult.*

The Utica & Schenectady Railroad has declared a dividend of 7 per cent. on the $1,600,000 paid; being $5,60 on each share, or $112,000; and at the same time made a call of $5 on each share, or $100,000, payable on the 1st of August.

COMMUNICATION.

Formation of Dew.

One of the operations of nature most important to the growth of plants, and without which, in some parts of the world, vegetation could not be carried on at all, is the formation of dew. The deposition of dew was formerly a subject involved in much mystery, but the researches of science and investigations in meteorology have thrown much light on the matter, though it cannot as yet be considered as freed from all difficulties. According to the best modern authorities, "the phenomena of dew admits of an easy and elegant explanation from the well known effect of the radiation of caloric from bodies. This radiation constantly taking place in all bodies, it is obvious that the temperature of any body can remain the same only by its receiving from another source as many rays as it emits. In the case of the earth's surface, so long as the sun remains above the horizon, it continues to receive, as well as to emit heat, but when the sun sinks below the horizon, no object is present in the atmosphere to exchange rays with the earth, which, still emitting heat into free space, must consequently, experience a dimunition in its temperature. It thus becomes not only many degrees cooler than in the day time, but also cooler than the superincumbent air; and as the atmosphere always contains watery vapor, this vapor becomes condensed on the cold surface; hence the origin of dew, and if the temperature of the earth is below 32° of hoar frost." This explanation appears very satisfactory as far as it goes in accounting for the deposition of dew, but there are some facts connected with the subject which do not seem to be fairly embraced in this or any other general solution.

What are the facts connected with the formation of dew? Observation shows us that the times in which dew is deposited most copiously, are those in which the morning and middle of the day are filled with vapor, but which, with all the agitation of the atmosphere, gradually disappears as the sun declines in the west. Vapor is composed of minute vesicles or bubbles, and these collected into masses form clouds. Vapor could not rise as it does, visibly in the case of steam, and invisibly in the case of evaporation from the surface of water or the earth, unless the atmospheric fluid with which these vesicles are filled was specifically lighter than common air. The most plausible supposition, and one which would seem to be justified by the nature of the phenomena, is, that the fluid which fills these vesicles is that ethereal substance called the electric fluid; and consequently each minute particle of vapor may be considered as a charged Leyden jar, and a mass of them when collected into clouds as an immense electrical battery. The researches of science have shown most conclusively the identity between the electric fluid and caloric, and hence it is seen that any cause which should abstract the caloric or electricity of the particles or masses of vapor, would at once affect their condensation. When the caloric is abstracted from a particle of vapor, the watery envelope forms an invisible drop, and is deposited in the shape of dew; when it is abstracted from a mass of vapor, as by a flash of lightning from the clouds, these separately invisible particles are united and drops of rain are the results. Much of the difficulty which has been found in divesting the formation of dew of its mystery has arisen from the fact that electricity and caloric have been usually considered as different things, whereas by admitting they are one, most of the difficulties vanish at once, and the deposition comes readily into the class of recognized phenomena.

In perfect accordance with the grand and universal law of nature, that an equilibrium of caloric or electricity must be maintained, a law which is unquestionably the cause of all circulation, and will probably be found that of all motion, the caloric of the surface of the earth thrown off by radiation, must be supplied from some other source, and this source, in the absence or great declination of the sun, can only be found in the caloric combined with the vapor of the atmosphere. Substances that radiate or throw off caloric the most readily are usually the soonest covered with dew, as glass, water, &c. Every one who has paid attention to the formation of dew must have noticed that the first appearance of moisture visible is a minute but rapidly increased drop on the upright pointed extremity of the leaves of grass, or similar plants, and this first appearance is usually some time before the setting of the sun. Much however is depending on the purity of the atmosphere and its freedom from all currents of air. The experiments of Hare and Silliman on electric currents with the voltaic battery, we are inclined to think throw light on this deposition of dew on the points of erect grass. In these experiments it was found that in the passage of the electro-magnetic currents when pencils of charcoal were used for the connecting points, a deposition of matter gradually took place on the negative point, while a corresponding loss was sustained by the positive one. In supplying from the atmosphere the caloric lost by radiation the grass points serve as conductors to the ethereal fluid; and as at the instant of contact between the attracted particle of vapor and the point of the grass, the caloric leaves the moisture which had served as its envelope, the latter is condensed and deposited on the point where the separation takes place; and as the current is constant the accumulation of the globule of dew is of course rapid, until the equilibrium between the atmosphere and the earth is restored.

After the formation of dew has commenced, any agitation of the air by winds, or the formation of clouds, will at once arrest its progress, as clouds prevent the radiation of caloric from the earth and its consequent cooling. A knowledge of this fact has enabled gardeners to preserve plants from frost that otherwise must have perished; and in the early settlement of the western counties of this state, the formation of artificial clouds as they may be termed, by the condensation at evening of the immense volumes of smoke that arose from the lands that were being cleared of their timber, was found to be an effectual safeguard to such late crops of corn as were endangered by frosts. Indeed it is found that the cooling of the earth necessary to the deposition of dew rarely takes place while the thinnest strata of vapor is visible in the atmosphere. Young plants in the garden may be preserved from frost by spreading over them any thing however flimsy that will prevent the radiation of the earth, as a simple mat, or a box with a millinet or muslin covering, or even a linen cloth, provided that the covering does not touch or rest upon the plants. Vegetables or trees growing near walls, houses, or high fences are sometimes saved by the partial check these afford to radiation; and every farmer who plants his orchard knows that corn or potatoes planted under the trees will remain green long after those around them have been killed. In this case the spreading top or foilage of the tree interceps the radiated heat and returns a part of it to the earth by the electric currents that exist in all living vegetables.

The rapidity with which dew forms about sundown may be considered a pretty sure criterion of the degree of cold which will prevail during the night; and of course the necessity of precaution, or otherwise, may be determined upon in season to save such plants as require protection. The formation of ice in warm climates furnishes a curious proof of the radiation of heat. In Bengal and principally in the vicinity of Calcutta, some 3 or 400 persons, previous to the introduction of New-England ice by Yankee enterprise, found a constant and profitable employment during the summer months, in the manufacture of ice, for the use of the European residents. Broad, shallow unglazed earthern pans. were placed on dry straw, and when water was poured into them, ice of the thickness of half an inch was sometimes formed in a night; and those nights, in which dew was deposited most copiously, were always found to produce the thickest ice, while clouds or wind, interrupted it entirely.

w. a.

Summer Soiling.

This term is applied to the feeding of cattle with grass, or grain, or other herbage, cut and fed to them green, in stables, sheds, or yards. It is extensively practised in Flanders, Holland, and other districts on the continent of Europe, and partially in Britain, and particularly in the vicinity of the large towns, where land is in great demand, or where it is naturally rich or has been rendered so by art. In these cases the profits are palpable, at least twice the number of cattle being subsisted upon the same ground, when the fodder is cut and fed green, as when depastured.

The advantages of the practice are stated to be, the saving of the crops from destruction when in pasture, by treading, staling, dunging and lying down upon them; in economizing food—cattle eating many coarse kinds of grass and weeds, when cut, which they will not touch when growing in the field; in the great saving of manure which it effects; in the advantages of rest and quietude to the animals; in the preservation of the ground from being poached in wet weather; and in the diminished expense of making and repairing fences.

The objections to the practice are, that it prevents cattle from healthful exercise, necessary to the young, to cows and sheep; that upon poor farms the saving in food does not make up for the expense of labor in tending the stock: and that it interferes with the regular routine of farm labor. And, in its application to us, it may be remarked, that we produce neither the tares, the sanfoin, nor but few of the turneps, which make a considerable portion of the soiling food in Europe. Our reliance would be upon early sown winter rye, clover, lucern and the common grasses.

Nicely managed experiments have been made, by some of the most eminent agriculturists of Great Britain, to decide upon the relative merits of soiling and pasturing, some of the results of which we will state in a summary form.

Mr. Curwen, well known to the agricultural reader as one of the most eminent farmers and greatest experimentalists in Britain, and withal a zealous advocate for soiling, instituted a number of experiments, which have been recorded. His first experiment was upon two cows, and the experiment continued from the 14th May to the 1st of October, one being soiled and the other pastured. The soiled beast gained 16 stone, the pastured one 9 stone. The first, after taking into account the relative value of food consumed, paid a profit of 10½d. (say 18 cents) per day; the other of 7½d.

He next took six three year olds, tied them up on the 27th June, and soiled them till the 9th November, *with grass of very little value*, cut from the hedges, plantations and walks, and during the last month had an addition of carrot and turnep tops. They gained 75 stone of flesh, estimated to be worth £17. 10s. or an average of £2 18s. 4d. each (about $11, 85.)

He next fed 17 calves, beginning when they were two months old. During the first month they had one gallon of new milk per day; for three months afterwards, three gallons. Turneps and hay were given with the milk. From June till October the food was clover; afterwards, till the end of May, turneps. In size they were little inferior to those of double their age. At 18 months old, one was slaughtered. The live weight, 770 lbs.; the carcass weighed 474 lbs., loose fat, 37 lbs. This was an Ayreshire; the Durhams, of which the flock in part consisted, were larger and in better condition, and would have killed 650 lbs. at least.

Mr. Brown, of Markle, made an experiment with 48 cattle, bought in autumn, and wintered in the farm yard. They were equally divided, and on the 4th of May one half were put to pasture, and the other into the yard, where they got a small quantity of Swedish turneps, until the clover was fit for cutting. During June and July, they were subsisted upon cut clover, fed in cribs, and the offal cleaned out and fed to swine. The yard cattle were then fed with tares until the second crop of clover was fit to cut, and upon this they were kept until sold, ten on the 28th August, and the residue on the 28th September. The statement of the cost and profit is given as follows:

The 48 cattle cost together, for purchase and wintering, £503 02 00

The 10 best of the soiled cattle were sold at £17 15s., and the remainder of the whole number at £14 5s., each, thus yielding,

For the soiled lot of 24, £377 00 00
ditto grazed do 342 00 000

Or 29s 2d. (about $6) per head more upon the soiled than the grazed cattle; although they were all purchased at one price, and separated with most accurate fairness. The food consumed by the 24

soiled cattle was grown upon 12¾ acres, and consisted of 8 acres of clover, 3 do. tares, and 1¾ of Swedish turneps. "Being £125 9s. for the cost of food and profit upon the stock." Mr. Brown expresses his belief, "that the saving per acre by soiling will amount to 50 per cent; or, in other words, that a field of clover and rye grass will feed one half more beasts when cut by the scythe, than when it is depastured." Sir John Sinclair states, that the same number of stock were soiled on 17 acres, which had always previously required 50 acres of pastures. In a trial reported to the board of agriculture, 33 head of cattle were said to have been soiled, from the 20th May to the 1st October, on 17½ acres, on which it is stated it would have required 50 acres to have pastured them. The above facts are abstracted from British Husbandry, Low's Elements, &c. which see.

We have gone into this exposition, from a conviction that soiling may be beneficially introduced here, in finishing cattle, stall-fed in the winter, for the spring and summer market—in feeding working cattle—and as an auxiliary means of increasing the products and profits of the dairy. We have, or may have, pretty ample resources for this mode of management, in the Swedish turnep, the lucern and the clover. The turneps will serve till June, with hay or straw. We speak from experience; for we have thus fed them for the last dozen years. The lucern is fit to begin to cut from the 15th to the 25th May, & clover by the middle of June. The precaution must however be observed, in changing from dry to green food, to use the latter at first sparingly, or to begin by mixing the two kinds.

Stall-fed cattle generally lose at first, on shifting them in spring from the stable to the pasture. Working cattle, after the labor of the day, fill themselves with cut grass more speedily than they can at grazing, and have more time, when fed, to ruminate and rest. And with milch cows, particularly when pastures are short, a bite of cut lucern or clover, at morning and evening, makes an astonishing difference in the product of milk. An acre of good lucern, judiciously fed in this way to a herd of cows, would, we think, increase the profits of the dairy at least $50 in a season. We have had as great a quantity of milk from cows in December, fed with roots, as in June in good pasture.

In conducting the soiling system, it is best to give the food often and in small quantities, as otherwise the cattle will blow upon and reject it; and given in too great abundance it will cloy them, and will be no longer relish. Straw mixed with green food tends to correct any disposition to looseness in the bowels. The remains of the food should be removed to the pig-pen, or elsewhere, immediately after the stock have done with it.—*Cultivator.*

From the British Farmers' Magazine.

Manufacture of Beet-root Sugar.

(*Continued*)

CHAP. V.

Defecation of the Juice.

The juice of the beet, as it first issues from the press, contains all the soluble matter of the root, an analysis of it giving (as will appear hereafter,) a mixture of sugar, water, and divers foreign substances. If the juice contained nothing more than sugar in solution with water, it would be easy enough to separate them by the simple process of evaporation, the water goes off in steam, and leaves the sugar behind. What then hinders the extraction of sugar from beet-root juice by the same simple means? The answer is obvious. Because of the foreign matter which the juice brings with it, and which, combined or mixed with the sugar, render the evaporation of the water difficult, and its crystallization extremely troublesome, if not impossible. The attention of the manufacturer must, therefore, be directed to the separation of these particles, and this is accomplished by the process known generally by the name of *defecation*. This is entirely a chemical operation. It consists in finding such agents as will precipitate, in a solid form, all the substances foreign to the sugar, whether in combination with it, or solidified without such combination. It is necessary also that these agents shall not be of a quality to alter the sugar when in contact with them, and that they may be afterwards carried away with the residuum. Whatever be the nature of the agent employed, it ought to be simple, and open to the comprehension of a common workman, and moreover, that it be not of too costly a description.

The only agents used in defecating are, snlphuric acid and lime. Great care is requisite in using them.

It has been else where stated, that the re-action of defecating agents ought to be assisted by heat; and it is on this account that coppers, or boilers, are resorted to. The following section describes this method of defecation.

§ 1. *Boilers for Defecation.*

These vessels ought to be circular, and should be formed of copper. Their dimensions vary with the magnitude of the works, from 228 gallons to 570 gallons; though some prefer a number of a smaller size, say 40 to 50 gallons. It is agreed on all hands, that the interval between the raspage and the formation of syrup ought to be as short as possible, in order to produce the most profitable results. In fact, the friction occasioned by rasping is necessarily accompanied by a certain portion of heat, which tends to increase the action of the press. Now, it is well known, how detrimental the action of heat is to all organic substances, dissolved or suspended in large watery masses. This action is easily discernable between the root and the pulp, and then again between this latter and the expressed juice. The change goes on increasing in proportion to the interval between the rasping and the defecation. The decomposition has often been such as entirely to prevent the formation and separation of the sugar. The copper then should be filled in the shortest possible space of time; but if large masses are acted upon, and, consequetly, large coppers made use of, it is essential, in order to charge them rapidly, that a number of rasps and presses should be employed, proportioned to the required despatch of the operation. Thus, to charge a boiler of between 500 and 600 gallons in two hours, which would be a reasonable time enough, it would be necessary to rasp and press, during this interval, about four tons roots. Supposing that a rasp is used which in 12 hours will finish eight tons of roots; supposing also a hydraulic press which is capable of working of 880 lbs. of pulp in one hour, it will require, in order to obtain 570 gallons of juice in two hours, three rasping mills and five presses; but if only this quantity is required to be obtained in twelve hours, and, consequently, that there is but one defecating boiler, the three rasps and five presses will only work two hours a day, and remain idle the rest of the time. This is bad. On the other hand, when it is attempted to fill a boiler of 570 gallons by means of only one rasp and one press, the inconvenience will occur of delaying the juice before process of defecation can be begun. Both these evils ought to be avoided.

A variety of reasons are given by M. Dubrunfaut, for preferring boilers of a medium size to those of large dimensions. He considers those of about 90 or 100 gallons as much more convenient than the larger sizes before enumerated. Of course two or more would be required, according to the magnitude of the work. Two boilers of these dimensions would readily do the work of one of 570 gallons, and the first cost of them would not be more. As soon as one is brought to the boiling point, the fire can be removed to the grate of the other; in short, whilst the process of defecating is going on in the one, the other may be left to precipitate its extraneous substances.

A defecating boiler, intended to act by precipitation, ought to be equal in height to its diameter. A fifth of the size absolutely required to contain the juice should be allowed for boiling space: thus, a boiler which would hold 100 gallons, ought to be large enough to *boil* one hundred and twenty gallons in. The boiler ought to be mounted to such a a height as to allow of the liquor running off clear, by an easy slope into the evaporating boiler. The temperature should never exceed 80° of Reaumur (212° of Fahrenheit.) Thus, admiting that the boiler is 36 inches in height, and the same in diameter, it should have a grate of about the following proportions:—

Length . . . . . 23 inches.
Breadth . . . . 15 "

This grate is of cast iron and composed of 10 bars. The bottom of the boiler is placed about 15 inches above the grate, round which is a flue to enable the flame to circulate to the height of the charge. This flue, at its opening into the chimney may form, in section, a parallelogram of 140 square inches. A Boiler on this construction presents to the fire a surface of 413 square feet, and will boil its contents in about three quarters of an hour, with the consumption of 24 lbs. of coal. If wood is burned there must be double the quantity allowed.

§. 2. *Appendages to a Defecating Boiler.*

They are the following:—

1. A thermometer and an areometer.
2. Scales and weights to weigh the lime.
3. A bin for lime, and wooden pails or buckets.
4. A measure either of lead or copper, for sulphuric acid.
5. A wooden instrument to stir up the liquor in the boiler.
6. A plated spoon, to observe the juice with, and an experiment saucer.
7. A skimmer.
8. A filter and funnel.

Areometer and Thermometer.

Beaume's areometer is generally allowed to be the best; it should be provided with a tin case, having a wooden handle. The liquor about to be weighed is drawn up in this tin case, which is held by the handle. It is important that the juice should be examined always at the same temperature.—It should be taken as it comes from the press, and plunged, by means of the tin case, in water from a well or pump, so as to reduce it to a temperature of 10° of Reaumar (55° of Fahrenheit.) Then insert the areometer; and if all subsequent trials are made with the same precaution, the comparative results will not fail to be correct. In this state the juice varies from 5° to 10° (areometriques) of Beaume. If weighed when boiling, a difference will be found of 4° more or less, because then, the heat expanding the liquid, diminishes the specific gravity of it.

The areometer will also be found useful in the evaporation of the Juice, to estimate the precise time favourable to clarification. Being of glass, and consequently very liable to be broken in the hands of common workmen, it will be necessary to have a number of them at hand.

The thermometer is used in defecation to judge of the state of the temperature, and thence to ascertain the proper time for adding the clarifying agents. The most convenient place to hang it is near the boiler, and it ought to be immersed in the liquor during nearly all the time of the clarification.

Scales and Weights to weigh the Lime.

These, it is unnecessary to say more of, than that they should be capable of weighing from 5 lbs. to 50 lbs.

Bin to slake Lime in, and Buckets for the Liquor.

The lime employed for the defecation of beet-root juice is generally unslaked, weighed in that state, then slacked with water, and afterwards, by adding more water, reduced to the consistency of cream. For this operation a bin, or cistern, of a particular form is required: it is, for the most part, circular, with a cover.

M. Dubrunfaut, however, is of opinion that lime should not be weighed till after it is slacked, as yielding more certain and uniform results; in which case, a large quantity might be slacked beforehand. It is sifted pretty fine, to separate all the coarse and and unburnt lumps, which, in the usual method of applying the lime, are reckoned as so many active agents, whereas, they are of no use at all in the clarifying process; and hence many errors in the general results.

A Lead or Copper Vessel for the Sulphuric Acid.

The sulphuric acid is usually diluted with five of six parts of water before using. This is performed in a wooden bucket, the hoops of which are of copper, instead of iron.

Instrument for stirring the Liqour in the Copper.

This should be a round stick or pole, twice as long as the copper is deep. At one end is a round piece of wood, about a foot in diameter, pierced with holes.

A plated Spoon in which to Examine the Juice, and a Saucer.

The spoon should be kept bright, that the workman may judge more readily when the clarification is complete.

Th saucer should be very white. The use of it is to receive the small drops of syrup of violets and *tournesol*, to ascertain, by touching them with the liquid under clarification, the excess of alkali and acid.

Large Skimmer.

This ought to be at least eight inches in diameter, and to be fixed to the end of a long handle. It is not always considered necessary to remove the scum from the boiling liquor, and especially when the precipitating system is resorted to, as it forms a sort of cover or guard to the liquor against too sudden refrigeration by the action of the air.

Filter for Skimmings.

An enclosed or covered filter is recommended in preference to the one in common use, it being important, in order to get as much liquor from the skimmings as possible, that they should not be suffered to cool too fast. The construction should be the same as that hereafter described for the juice, only that the one may be made of coarse cloth, or canvass, and the other of fine linen. The filter should be provided with a receiver adequate to the amount of juice from one charge.

§. *Of the different methods of Defecation.*

This is one of the most difficult operations connected with the manufacture of beet-root sugar. The results are perpetually changing, as the nature of the root changes during the progress of the work. We proceed to describe the simplest and most economical of the means employed, viz., lime alone, or sulphuric acid and lime together.

The first method of defecation—that of the Colonies.

After detailing the origin and progress of defecation in France, the author proceeds to show that lime alone, if not the best means, is at least capable, in good hands, of producing very important results; and instances the manufacture of M. Houdart, near Douay, as one of the best and most successful on this principle. Suppose 114 gallons of juice are to be clarified. The boiler being charged, and the fire burning, the thermometer is placed in it, and should be kept there till it amounts to 60° or 65° (167° or 178° of Fahrenheit.) During this interval eighty-eight pounds of lime slacked and sifted, are weighed out; four or five other bags are then similarly prepared, each bag containing 7 pounds of lime. This done, the 88 lbs. of lime are put into a wooden vessel, where they are mixed with clear water, till they become like milk. This mixture is poured into the boiler when the temperature is above 60° (Reaumur.) The whole is then briskly stirred for some minutes, in order to incorporate the lime well with the liquor. Before the lime is added, a thick scum will show itself on the surface. Lime often destroys this scum, or, at any rate, it is suspended in the liquid by agitating it when the lime is added. When thoroughly mixed, some minutes should elapse before the full effect will be produced; then, with a bright spoon, take a little of the liquor, and examine it carefully: if the quantity of lime be sufficient, the juice will exhibit a number of clots, or particles, in suspension, which will soon settle to the bottom of the spoon, leaving the upper part of the liquid perfectly clear and transparent, and more or less of an amber color. If, instead of this, the lumps are very much divided, and only swim in the liquor without settling to the bottom, even for several seconds, and if the juice remains of a thick milky color, it is a proof that more lime is wanted.

One of the little parcels of 7 lbs. is then mixed with water, poured into the boiler, and well stirred as before. The juice is then again examined with the spoon, and if the symptons are still not so favorable as they might be, another 7 lbs. are added, and so on, 7 lbs. each time, till the defecation of the whole is complete.

88 lbs. of lime to 114 gallons of juice may always be used with safety. It is, in fact the minimum dose that ought to be applied. The quantity varies with the quality of the beet root, and the period of the season when it is applied. Thus, at the beginning of the season, when the roots are rich and full of sugar, the greater will be the proportion of lime necessary. The object of the lime being to precipitate certain substances which impede the formation of sugar, it should, of course, be added in quantities adequate to the amount of these substances; for experience seems to show, that as the quantity of sugar increases, so will all these extraneous matters. Thus, a firm, solid beet root requires more lime than a watery root, and *vice versa*.

On the whole, the safest way is to *begin* with *little* enough of lime, for it is very easy to add more from time to time, as above directed. But it is not to be inferred from hence, that, *on the whole*, a small quantity is preferable to a larger. So far is this from being the case, that it is considered better to use too much than too little; for though an excess of this alkali is prejudicial to the sugar, it is always less so than an insufficient quantity. The observations of the workman cannot be too frequently taken during the process of defecating. A clear liquor, and a perfect precipitation, are the main objects to be accomplished. If these are not to be obtained, or imperfectly so, the results will be sure to suffer.

It has been imagined by M. Barruel, that the red beet requires more lime than the white; but M. Dubrunfaut considers this opinion as not altogether correct, and is rather disposed to refer the apparent difference to the season, which might that year produce a red beet of a firmer and less watery description than the yellow.

The beet juice, when it first comes from the press, it is of a milky hue, and yet dingy. When heated, the scum and froth rise, but as soon as the lime is added, the black, dirty color disappears by degrees, and abundance of flakes are seen in the liquor. These flakes are usually of a yellowish grey color; when the proportion of lime is sufficient, they separate from the liquid and rapidly sink to the bottom. When arrived at this stage of the defecation, the fire must be withdrawn, and the boiler left to itself for an hour or two, that the whole may settle properly. The cock placed just above the bottom of the boiler should be opened, to draw off the liquor clear. The juice is then conveyed to the evaporating pans —of which more hereafter. Care should be taken to watch the liquor as it runs off, lest any part should become thick and turbid, especially towards the end; so soon as this is perceived, the cock should be closed and the lower opened that the residuum may pass through the filter. When this is all drawn off, the boiler is ready for a fresh charge.

The defecation by lime is denominated *the system of the colonies*, because there the process was made trial of, and long before beet-root sugar was even thought of. But it ought to be explained, that in the present day, it is not used to so much advantage in the colonies as in France. There, in fact, the management is left to a slave, who not unfrequently applies the lime at random: and of course, the results are, and must be, very unequal.

It has been shown that it is better to use too much than too little lime in defecation. Both are stated to be evils, and yet of two evils, the former is the least. After having operated on the extraneous matter in the sugar it then begins to act on the sugar itself.

Defecation by lime alone, then, has this grand inconvenience—that a part of the sugar is destroyed to obtain the other. In this process, in fact, when the syrup is run into moulds, it produces an abundant chrystalization; and the molasses, which come from it more rapidly than by any other method, have a very disagreeable taste and smell; they have but little sweetness, and if by any known process a second chrystalization be attempted, not an atom of sugar can be obtained from them. Nay more, the sugar partakes of the bad taste and smell of the molasses, and is thereby rendered unsaleable in the market. Even after refining, these objections are still more or less perceptible. M. Dubrunfaut states that he has experienced this himself, as a refiner. The sugar produced by the lime was always very fair to the eye, the grain large, strong and open; but it had a particular smell, and left a disagreeable flavor in the mouth.

It is a pity that the defecation by lime presents these inconveniences, for it is the mode of all others the simplest, and best adapted to common farm establishments. It is, indeed, on this account that many manufacturers who have adopted it continue still to use it notwithstanding the inferiority it presents both as to quantity and quality of its results, as compared with those of other and more complicated methods. It cannot be recommended, even managed in the best known manner. Its simplicity does not overcome its imperfections, and the author above quoted greatly prefers either of the following methods.

Notwithstanding the decided opinion here expressed by M. Dubrunfaut against the employment of lime alone as a defecating agent, it has been ascertained, by subsequent experience, that it is capable, under proper management, of producing very favorable results, both as to qnality and quantity.

(*To be Continued.*)

Culture of Wheat.

Philadelphia, May 4, 1837.

In the parish of Crighton, in the country of Edinburg, there is a farm called Saughland, the surface of which, is a gently inclining plain distant from the sea about twelves miles, in a straight line. Its position is north of the Lammermoor, and east of the Pentland hills. This farm is compact, and contains about six hundred English acres, and is on the boundary line of the wheat region; for it is only on the lower part, or one third of the whole, that wheat could be cultivated in 1790.

On this farm, I know that from the time of sowing to the commencing to reap wheat, the period was about 13 months, no less than one year and one month. The grain was large but coarse in quality; not so valuable as that grown in the more favorable climates. The coarseness of the grain was not all owing to the coldness of the climate, but, in part to its wetness. The hills in the vicinity attract the vapors, and this induces the rains to commence sooner in their neighborhood, and continue longer than in places a greater distance from the hills.

The circumstances have been recalled to memory by some accounts I have received lately, of a new practice adopted in some part of France, which is, that they sow their wheat in June, and mix with it the two rowed barley, a grain that vegetates and grows with great rapidity, and is too delicate to resist frost. The wheat, and its companion, the barley, are both mowed down in the fall, and fed off to the cattle.

The practice of the Scotch farmers in the higher districts, and what we are told of the French having carried the practice still farther, and made an improvement, by sowing in June, and mixing it with barley, suggests to us the making experiments to ascertain the result in our own country. It is very desirable that our farmers should, this very season, try the sowing of wheat mixed with barley, so early as June; that if it answers, the practice may be adopted as soon, and as generally as possible. The two rowed barley must be preferable to all other grains, on account of its rapid growth, and the certainty that it is killed by winter.—Grains that may in part survive winter, would mix with and injure the value of the wheat.—In the next place, we have not been in the practice of sowing two rowed barley; there will be some difficulty in procuring it for the mixture, and should it prove that the June sowing is an advantage, there will be a necessity for raising or importing this kind of barley. The wheat that remains in the stubble, after reaping the June sown grains, forms the crop that comes to maturity in the succeeding year.

Of late years, from some cause, even in the best wheat districts, the wheat crops have been very moderate and precarious. Be the cause what it may, perhaps early sowing will mitigate the evil; and the presence of the barley may attract the attention of Hessian fly and thus protect the wheat from the ravages of that insect.

To extend the cultivation as far north as possible; render the crops more certain in the wheat districts, and protect it every where from the destructive effects of the fly, are objects of great importance, and ought to secure the attention of farmers to this, and all projects that are recommended to us by their feasibility; and experiment is the only test to be relied on, as to utility, and the fact of wheat having been in the ground for 13 months, and the accounts of sowing in June along with barley, warrant the presumption that the plan may succeed here; and

will induce experiments on a moderate scale, to be made all over the United States.

Where two-rowed barley cannot be got, four rowed (Bear) should be used, and in the absence of both employ oats; and should it happen, that part of the oats or four rowed barley survives the winter, their mixing with wheat will injure its market value, but this cannot mar the experiment.

I hope that yourself and associates will give to the subject your serious attention, and as the season of early sowing is at hand, proceed with as much expedition, as the nature of the case will permit. As for this communication, you are at liberty to make such use of it as appears most likely to promote the object we have in view. Respectfully, yours.

JAMES RONALDSON.
No. 200, South 9th St.

Elijah Wood, Esq. Ky. Co. Ag. So.

P. S. To guard against giving to you a project founded on false principles, I have submitted the preceding to a friend, in whose good sense, agricultural knowledge, practical and theoretical, I have full confidence. I find his opinion in favor of early sowing, and considers the plan of sowing, in June, July and August, worthy of your attention. At his instance, I request your attention to the fact, that the presence of lime is an essential constituent in a good wheat soil, and that if this element is absent in your lands, he advises the farmer to manure with lime; for further particulars he refers to the May, 1837, number of the Farmer's Register, published at Petersburg, Va.

My friend recommends that the land for early sowing, should be well prepared, and made mellow by repeated ploughings, and he thinks the stable or other manure, should be put on as a top dressing, at the commencement of winter, and not at the time of sowing. J. R.

From the (London) Farmer's Magazine, for March, 1837.

A new Oleaginous Plant.

The celebrated botanist *Candolle* has called the attention of European agriculturists to a plant cultivated in Abyssinia and India, from the seeds of which an oil is extracted, which is used not only in the preparation of food, but various other necessary and domestic purposes. It is an annual herb, named *Mam-tilla* in Bengal; and, as all the plants of that tribe readily habituate themselves to our climate, it is capable of being made a valuable addition to our oleaginous seeds.

Bone Manure.

The attention of the purchasers of crushed bones is called to the fact, that at this present moment the whole of the refuse from the glue yards of Scotland and Newcastle is imported into Hull for the purpose of grinding up with bones. It is a manure, I admit, but of very inferior value to bones, usually bought at 1*s* per bushel; the present price of bones, 2*s* 6*d* a bushel, holds out great inducements to adulterate. When you purchase crushed bones, let the merchant be asked the question (on oath) whether they are mixed with saw-dust, scrapings of ware-houses, refuse of glue yards, &c. The farmers of Lincolnshire, convinced of the facts above stated, are this year buying the bones uncrushed, and hiring portable mills for the breaking of them. It is intended to publish the names of the parties to whom vessels are consigned for the purpose of cheating the farmer.—[*Ib.*

Bread for Cattle and Horses.

Experience has proved in Sweden that one ton of oats make four hundred and eighty loaves, on which a horse may be better kept (at the rate of two loaves a day) for two hundred and forty days, than if he had had six tons or even more of raw oats. The husk of the oat remains mixed with the flour; the weight of the water used in making the dough is gained, and a great deal of water is necessary. With a given quantity of wheat flour, *without the husk*, a quantity of bread is made for the use of man, weighing more than the raw grain *with the husk*. On the other hand, a less weight of bread than of oats should be given to horses, because the bread is more nourishing, especially if rye be mixed with the oats. It has been calculated in Sweden, that after all expenses have been taken into consideration, a great saving is effected by feeding the horses on bread made of oats and rye. They never give them hay without mixing it with two-thirds of chopped straw, and adding bread broken up. The better to preserve this bread, it should be made in the shape of cakes; and if it be prepared like biscuit, it will keep very long without losing its nutritive qualities. —[*Ib.*

Use of Human Bones.

Many tons of human bones are every year sent from London to the north, where they are crushed in mills, contrived for the purpose, and used as manure. Yet, with all this clearance, the number of the dead increases in such frightful disproportion to the space which we allot for them, that the question has been started, whether a sexton may not refuse to admit iron coffins into a burial-place; because, by this means, the deceased take a fee simple in the ground, which was only granted for a term of years. A curious expedient has been found to answer at Shields and Sunderland. The ships which return to these ports with ballast were at a loss where to discharge it and had of late years, been compelled to pay for the use of the ground on which they threw it out. The burial grounds were full; it was recollected that the ballast would be useful there, and accordingly it has been laid upon one layer of dead to such a depth that graves for a second time are now dug in the new soil.—[*Ib.*

The Ground Flea.

This insect is frequently very destructive to small plants. A gentleman informs us that cucumber and other plants may be saved in the following manner. Raise the earth around the hill just outside the plants, a little higher than the plants, then take fresh manure from the barn yard and mix it with water making a thick liquid substance, pour this on the hill till the plants are entirely covered, and as the water subsides the manure will stick to the plants and prevent the depradations of this mischievous insect. The middle of the day is the best time for this operation, as the insects are then at work.—*Yankee Farmer.*

The Peoria Register states that in the county of Tazewell, in Illinois, about two miles east of Peoria, is a grape vine which measures forty-one inches in circumference.

Valuable Publications.

THE following valuable works are published by *D. K. Minor* and *G. C. Schaffer*, 30 Wall-street, New-York, to whom all orders should be addressed:

New York Farmer, and American Gardeners' Magazine,—published in semi-monthly parts of 16 pages, at Three Dollars per annum, in advance.

Rail Road Journal, and Advocate of Internal Improvements—published once a week, in a large octavo form of 16 pages at five dollars per annum, in advance.

Mechanics' Magazine, and Journal of the Mechanics' Institute—published and forwarded, in weekly sheets of 16 pages, or monthly parts of 64 pages, if desired, at three dollars per annum, in advance.

Transactions of the Institution of Civil Engineers of Great Britain—Republication, in six parts. This work is from the pens of the most eminent Engineers in Great Britain. Price three dollars per copy, or five dollars for two copies; it can be sent by mail to any part of the country. The English copy, from which this is printed, cost ten dollars, and others were sold for the same by the importers. There will be about forty pages of Engravings, neatly done on wood.

Also, Pambour on Locomotion; Van de Graaff on Rail Road Curves; Nicholson's Abridged Treatise on Architecture, with over 40 pages of Engravings; and Views of the Thames Tunnell.

Improved Cultivators.

JUST received from Albany, a few of Bement's Expanding Horse Hoes or Cultivator, with extra mouldboards, &c. complete. These are the most approved and perfect implements of the kind now in use, and deserve the particular attention of Genesee Agriculturists.

REYNOLDS & BATEHAM.
Rochester Seed Store, June 29, 1337.

Valuable Works on Gardening.

THE YOUNG GARDENER'S ASSISTANT—containing practical directions for the cultivation of Vegetables, Fruits and Flowers. By T. Bridgeman, seedman and florist, New York—seventh edition, improved. Price $1.

THE FLORIST'S GUIDE—containing practical instructions for the cultivation of Flowers. By the same author. Price 37 1-2 cents.

THE KITCHEN GARDENER'S INSTRUCTER—containing ample directions for the cultivation of culinary vegetables, herbs, &c. By the same author. Price 37 1-2 cents.

For sale by REYNOLDS & BATEHAM,
May 20. Rochester Seed Store.

Berkshire and China Pigs for sale.

THE subscriber has a considerable number of the pure Berkshire and China Pigs on sale at his residence on the Niagara river, 2 miles below the *B*lack Rock mills. *He* has also crosses of the *B*erkshire and China, and the China with the long English breed which are equally quiet in their habits, and possess the same tendency to fattening as the former, and have much the advantage in size. The character of these breeds are so well known throughout the state that any description would be superfluous; they are the choicests breeds in England, and the only kind used, by their best farmers, and it is believed the same quantity of food will make from 25 to 75 per cent. more pork in these hogs than if fed to the ordinary breeds.

PRICES.

Pure China or cross of China with the long English per pair at 4 weeks old,	$12 00
do. do. do. 6 weeks old,	15 00
Cross of China & Berkshire, per pair at 4 weeks old,	14 00
do. do. do do 6 do	18 00
Pure Berkshire, do. 4 do.	15 00
do. do. 6 do.	20 00

Communications made through the post office, should be directed to Buffalo.

june3tif A. B. ALLEN.

Greenhouse and Parlor Plants.

THE splendid collection of Ornamental Plants at the Rochester Greenhouse on Sophia street, are now in a fine healthy condition and ready for sale.

The assortment is very large and embraces many of the most rare and beautiful Flowering Plants, all of which are of easy cultivation and will thrive in a common sitting room with ordinary attention.

Depending on extensive sales and desiring that all who are fond of plants, should enjoy that innocent gratification, we have determined to sell at very reduced prices.

Many of the plants are now in bloom, and the public are respectfully invited to call and see them. The House will be open every afternoon. REYNOLDS & BATEHAM.
May 27.

Still More Seeds!!

WE have just received large additional supplies of genuine Orange Carrot, Mangel Wurtzel, Ruta Baga, and English Turuep seeds, of the best quality.

Also, a good supply of Cucumber, Melon, Squash, and Pumpkin seeds.

The unprecedented demand for seeds this season, had exhausted our stock of some kinds. We can now supply orders at very low prices.

REYNOLDS & BATEAAM,
Rochester Seed Store. Arcade Buildings.
May20.

2.000 LBS. Ruta *B*aga, English Turneps, and Mangel Wurtzel seed, just received from England, and for sale at reduced prices, at the English *S*eed *S*tore, 62 *B*uffalo st. KEDIE & HOUGHTON.
april 29

3.125 L*BS.* Ruta *B*aga, White Flat, Norfolk, Long Tankard, Yellow Bullock, and other Turneps, Mangel Wurtzel, French Sugar Beet, and Orange Carrot, with a great variety of *English Imported Garden Seeds*—"cheap as dirt." at the Rochester Seed Store, *Arcade Buildings.* apr29 REYNOLDS & BATEHAM.

Fruit Trees For Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.
apr 15-tf

Morus Multicaulis.

JOSEPH DAVENPORT offers for sale 50,000 plants of the true Chinese Mulberry, or Morus multicaulis. Trees will be carefully packed and forwarded as early as desired. Orders must be sent to Colerain, Mass. till the 15th of March; after which time to Hartford, Ct. All inquiries will be attended to at his plantation, 5 miles south-west of the city. Earl orders only will be supplied, as arrangements will be made use all not called for soon.

Colerain, Jan. 23. 1837.

Monroe Horticultural Garden & Nurseries, Greece, Monroe Co., N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.

From the Virginia Farmer's Register.

Hedges—Osage Orange.

Hitherto, attempts to construct live fences in this country have mostly failed, in consequence of the want of adaptation in the material to the circumstances of soil and climate. The thorn flourishes well in the humid climate of England, but in our hot and dry seasons its growth becomes feeble and stunted. The cedar and some other plants, though very ornamental, constitute weak barriers against the inroads of stock.

So many unsuccessful attempts to grow hedges, especially in the states north of us, have induced a general prejudice against that species of enclosure. Every person, however, is disposed to admit, that if a suitable plant for the purpose could be introduced, it would be an important acquisition. At present, each farm is obliged to have from a fifth to a third of its contents in timber, in order to main tain its enclosures. If efficient hedges could be substituted, the advantages would be obvious. A large portion of good land, now unproductive, might be brought into cultivation; and a great amount of labor might be saved, which we are now compelled to bestow on the present system of fencing—to say nothing of the improvement in the rural appearance of the country, which would be effected by doing away our unsightly log fences, and rearing hedges in their places.

It is gratifying, therefore, to be assured, that in one of our native plants; namely, the *maclura* or Osage orange, we are likely to realize this desirable object. The maclura is a deciduous tree, growing indigenously in Arkansas and Louisiana—is perfectly hardy in this latitude, and even as far north as Boston. For a number of years it has been cultivated in the grounds of a few private gentleman, and in some of the large nurseries. It is only recently, however, that its value has been appreciated, or any pains taken to propagate it extensively. In its native *habitat*, it attains to the size of a tree of the second or third class; but in this latitude, its altitude is very moderate, seldom rising to the height of fifteen feet. Its great merit consists in the spreading manner of its growth, the denseness of its branches, and the armature with which they are furnished. Planted in hedge-rows, the maclura would never become unmanageble on account of its size—at the same time, its growth is sufficiently vigorous to make a fence in three, four, or at most, five years, from the seed. It may be asserted with safety, that on land of tolerable fertility, the labor and expense of perfecting a system of hedges, would not be greater than to keep our ordinary enclosures in good order, for the time required to construct them. When completed, this heavy item in every farmer's account would thenceforth be expunged.

The maclura is readily raised from the seed. Unlike those of the thorn, they require no preparation—on the contrary, they vegetate with certainty in two or three weeks after planting. Under tolerable care, the seedlings will grow two feet or more in height the first season; after which, they are fit to be removed from the nursery rows to the place designed for the hedge. I raised a number of plants the past year from seeds, the produce of a tree growing in my garden, now eight or nine years old.

For an individual to engage in the business in earnest, it would be best for him to obtain the seed from the south-west, rather than to purchase the plants from a nurseryman. A few dollars would procure enough of the former, and pay all the expenses of transportation, to set a long line of hedge. The preferable mode would be to have them brought in the berries, from which they might afterwards be picked without much trouble. Fifty berries would yield at least a pound of seed, and a pound contains from eight to ten thousand grains. It is the practice to place the sets from twelve to fifteen inches apart, in a single row. These facts will enable any person to form a correct judgment of the number necessary to plant any given length of hedge.

But it is not to be expected, whatever may be the adaptation of any plant to the purpose of hedging, that it will, under a long time, be brought into general use. The most palpable improvements are slow in being adopted. A considerable portion of our country is moreover to much impoverished to admit of the successful rearing of hedges. They belong eminently to a state of cultivation where taste and industry are measureably combined. But if we have worn-out fields, we have also fine districts of country, where their pleasing effects, as well as utility, would be most manifest. What an air of neatness and improvement they would impart to the finely cultivated farms on James river, both above and below Richmond, to those also on the Rappahannock, the Roanoke, and in many other sections of the state that might be designated with equal propriety. In most of these places, the lands are so valuable that there is now a great deficiency of timber; and, from necessity, they are therefore almost exclusively devoted to grain. Along the lines of canals also, where permanent fences are obliged to be maintained, there would be a great advantage in planting hedges at once. The idea that when fairly established, they will never need removal, would inspire a degree of security which cannot be felt by those persons who are in the habit of patching up decayed fences, and calculating the value of a rail in resisting the depredations of stock.

Goochland county, Va. T. S. P.

A COTTAGE GARDEN, properly cultivated, is full of beauty. Its well formed walks and borders, adorned with fragrant flowers, exhibit a gorgeous display of richness which cannot be surpassed. The English cottager takes a praiseworthy pride in the various species of flowers which adorn his garden, and not unfrequently prizes are awarded to him by horticultural and other Societies, for his skill in bringing to maturity, and presenting the world with improved specimens of floriculture. The study of the vegetable kingdom is also a subject of his earnest solicitude, and the avidity with which he pursues this favorite object is the theme of frequent admiration. The cognomen of "the gardens of England" is certainly an appropriate compliment, and it is but justice to remark that we are in a good degree indebted to the skill of the gardeners of our "father land" for many of the beautiful embellishments of our gardens. Our author recites several useful hints on this subject, which I here subjoin:

"Another way in which woman may make her labor extremely profitable is in the management of the garden. She may easily acquire skill and experience, and for my part I think she cannot have a prettier amusement. If there were nothing to be got by it, it is worth a little labor to have the view from your cottage window, ornamented with roses, honey-suckles, stocks, and mignonette, instead of seeing a heap of rubbish, or a slough, or a plantation of thistles or stinging nettles. But, let me tell you there is something to be got by it. If you live near a market town, and have a turn for gardening, I do not know of a better thing for a woman to turn her hand to. If proper pains were taken with a flower bed, (and I know of knothing which yields profit without taking pains, except it be money in the funds, and the likely way to have that, is by taking pains to produce it,) a flower bed well managed, will furnish you (besides supplying your bees, which, under such favorable circumstances, you will of course keep,) more than half the year with four or six nosegays a week, which may be sold to advantage. Suppose they bring you but three pence a week all the year round—thirteen shillings—it will buy your husband a new hat, or your child a warm coat. But this is not all—you will save some seeds of your annuals, and more than to stock your garden for the next year. These you will carefully separate and mark, keeping them from frosts and rain in the winter, and then, in March or April, when people begin to think of flower seeds, do them up in penny or two packets, and display them for sale. If you sell but two or three shillings worth, they will buy what lazy, shiftless people are distressed for."—*Newark Daily Advertiser.*

MUSIC.—It is now proposed that this shall be made a regular branch in our schools, and every friend of the people must wish success to the experiment. I am not now called to speak of all the good influences of music, particularly of the strength which it may and ought to give to the religious sentiment, and to all pure and generous emotions. Regarded merely as a refined pleasure, it has a favorable bearing on public morals. Let taste and skill in this beautiful art be spread among us, and every family will have a new resource; home will gain a new attraction; social intercourse will be more cheerful; and an innocent public amusement will be furnished to the community. Public amusements, bringing multitudes together to kindle with one emotion, to share the same innocent joy, have a humanizing influence; and among these bonds of society, perhaps no one produces so much unmixed good as music. What a fullness of enjoyment has our Creator placed within our reach, by surrounding us with an atmosphere which may be shaped into sweet sounds. And yet this good is almost lost upon us, through want of culture of the organ by which this provision is to be enjoyed.—*Dr. Channing.*

HOME.—What magic forms a halo around this word! The toil-worn mariner, the dust-covered traveler, the long separated friend, the time-wearied pedestrian hails it as the sweet haven of his rest. How joyous have been our sensations when from a distance we have beheld the ancient "home of our childhood;" and from amid the trees which surround the cottage of our youth, seen once more curling the smoke which warms the domestic fireside. There may be no country on earth, unless we except Switzerland, whose inhabitants cherish the loved thoughts of home like those of New Hampshire; there is a charm hangs round our rugged and cloud cap'd hills, and verdant rivulet-watered vales, which time cannot break, absence nor age destroy.—*Dover N. H. Gazette.*

LOVE OF FLOWERS.—Three acres of flowers and a regiment of gardeners bring no more pleasure than a sufficiency. Besides which, in the smaller possession, there is more room for the mental pleasure to step in, and refine all that which is sensual. We become acquainted, as it were, and even form friendships, with individual flowers. We bestow more care upon their bringing up and progress. They seem sensible of our favor, absolutely to enjoy it, and make pleasing returns by their beauty, health, and sweetness. In this respect a hundred thousand roses, which we look at *en masse*, do not identify themselves with us in the same manner as even a very small border; and hence, if the cottager's mind properly attuned, the little cottage garden may give him more real delight than belongs to the owner of a thousand acres.

Silk Reeling.

We have repeatedly urged upon silk growers the necessity and importance of early attention to the establishment of family filatures, and we would again press the subject upon them as being indispensable to their realizing the greatest profit from their plantations and labors. In former times, when the music of the spinning wheel was heard in every farmer's dwelling house, it would have been considered miserable household economy by the mother, for the daughter, after filling the spool and spindle, to transport the product of their labor to a distant factory merely for the purpose of having it reeled into skeins. Instead of this they early taught them to reel as well as spin, and in this we have an instructive lesson in the culture and manufacture of silk. Let every mother acquire the art of reeling the silk, as well as rearing the worm, and when she instructs her daughters in the latter, give them lessons on the former, and both branches will soon become as familiar to them as spinning and reeling woolen and linen in the old fashioned method.—*Silk Cult.*

Important Process.

A new process has been discovered at Strasburg, by means of which a chrystalized sugar is produced in twelve hours from the beet root, and which does not require any farther refining. The invention is the more curious, as neither any acid or chemical agency is employed in this remarkable operation, and the use of animal black is entirely dispensed with. It has also the advantage of saving twenty percent in the consumption of fuel. The new process is applicable in all the present manufactories of sugar, with the exception of those upon the principle of the defecation of the beet-root. The inventor is M. Edward Stoli, who, though not more than 24 years of age, is already highly distinguished for his experiments in chemistry, and his works in polite literature.

In Prussia the potatoe is cultivated with peculiar success—as the stalk grows, the earth is heaped up, leaving only three leaves at the top; roots are thus greatly increased, and the produce is said to be astonishing.